



THIRD SPACE
LEARNING

Mathematics

Paper 3

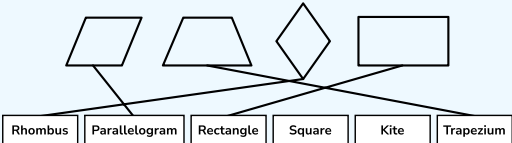
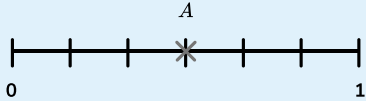
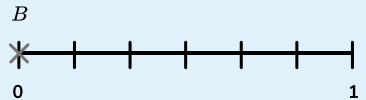
(Calculator)

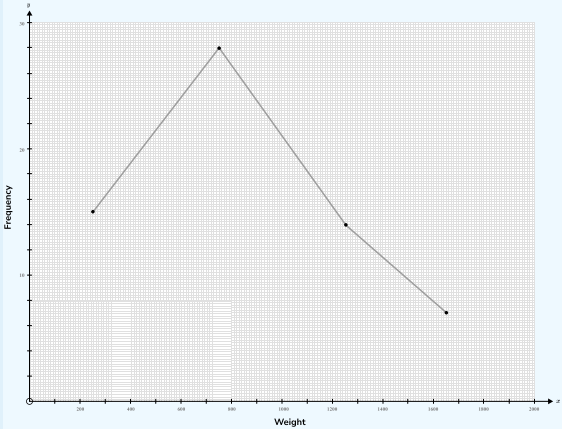
Foundation Tier

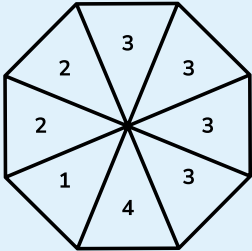
Mark Scheme

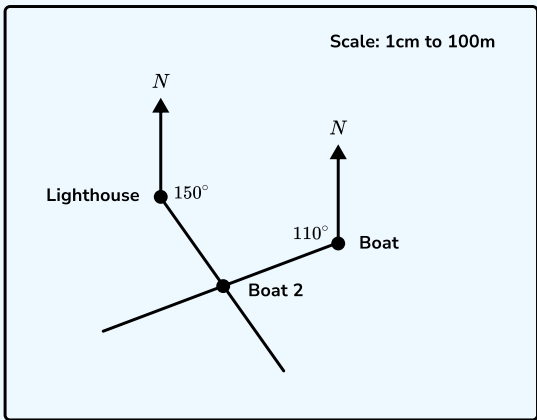
Edexcel GCSE

SET 1A

Question	Working	Answer	Notes
Q1			A1 At least 2 correct A1 All 4 correct
Q2a			A1 cao
Q2b			A1 cao
Q3a		10	A1 cao
Q3b		32	A1 cao
Q3c	$\frac{64}{100}$	$\frac{16}{25}$	M1 for writing $\frac{64}{100}$ A1 cao
Q4a		$24+10-1$	A1 cao
Q4b		$1 \div 2$	A1 cao
Q4c		1, 2, 6	A1 All three factors identified
Q5	$180 - 45 - 45 = 90^\circ$	Isosceles and Right angled	A1 Isosceles A1 Right angled (with no incorrect words circled)
Q6a		Triangular prism	A1 cao
Q6b		9	A1 cao

Question	Working	Answer	Notes
Q6c	$\frac{1}{2} \times 16 \times 11 = 88\text{cm}^2$	88cm^2	M1 Correct formula for area of triangle used A1 cao
Q7a		$\frac{12}{16}$	A1 oe
Q7b	$\frac{2}{16} \times 100 = 12.5\%$	12.5%	M1 $16-14=2$ or $100-87.5=12.5$ seen A1 cao
Q8			M1 At least three points plotted correctly M1 All four points plotted correctly A1 Points joined with straight lines
Q9	12, 24, 36, 48, <u>60</u> , 72, 10, 20, 30, 40, 50, <u>60</u> , 70, 15, 30, 45, <u>60</u> , 75,	Pencils: 5 Pens: 6 Rulers: 4	M1 60 or other common multiple identified A1 At least one number of packs correct A1 cao
Q10	$180 - 32 = 148^\circ$ $148 \div 2 = 74^\circ$	$x = 41^\circ$ $y = 74^\circ$ $z = 74^\circ$	M1 $180 - 32 = 148^\circ$ A1 $y = 74^\circ$ A1 $x = 41^\circ$ A1 $z = 74^\circ$

Question	Working	Answer	Notes
Q11			A1 3 seen in 4 sections A1 At least one 1 A1 cao
Q12	$4n-1$: 3, 7, 11, 15, 19, 23, 27, 31, $3n+2$: 5, 8, 11, 14, 17, 20, 23, 26,	11 and 23	M1 Correctly writing the five terms of at least one sequence A1 Any number in both sequences A1 cao
Q13a		Class A: Median 17.5, Range 19 Class B: Median 14, Range 8	A1 Both values for range correct A1 Median for class B correct A1 Median for class A correct
Q13b		The median is higher in class A and the range of values is much higher in class A	A1 One correct statement comparing the two data sets A1 Two correct statements, one comparing the median and one comparing the range

Question	Working	Answer	Notes
Q14	Eloise x , Max $2x$, Callie $x-2$ $x+2x+x-2=38$ $4x-2=38$ $x=10$ Eloise 10, Max 20, Callie 8	Eloise 10, Max 20, Callie 8	M1 Attempting to write expressions for the number of marbles each child has M1 Adding the expression and putting them equal to 38 M1 Solving to give $x=10$ A1 Substituting 10 into the expressions giving Eloise 10, Max 20, Callie 8
Q15a		500m	A1 cao
Q15b		105°	M1 line drawn between the lighthouse and the boat A1 allow answer between 103° and 107°
Q15c			M1 A line drawn from lighthouse or the boat on a correct bearing A1 cao
Q16a		$-6x^2 + 3x$	A1 cao

Question	Working	Answer	Notes
Q16b		$2ab(4a+5b^2)$	M1 Any correct factorisation A1 cao
Q17a	$30 \div 12 = 2.5$ $120 \times 2.5 = 300\text{g butter}$ $150 \times 2.5 = 375\text{g sugar}$ $2 \times 2.5 = 5\text{ eggs}$ $160 \times 2.5 = 400\text{g flour}$	No she does not have enough flour	M1 2. 5 seen M1 At least 2 quantities correctly calculated A1 No with a correct explanation
Q17bi		120:150	A1 cao
Q17bii		1:1.25	M1 Any correct simplification of the ratio A1 cao
Q18a	$40 \div 1 = 40\text{km/h}$ $30 \div 0.5 = 60\text{km/h}$ $60 \div 2 = 30\text{km/h}$	B	M1 Calculating at least 1 speed correctly A1 cao
Q18b	$130 \div 3.5 = 37.1\text{km/h}$	Yes	M1 Attempt at using total speed and total time A1 Yes with relevant working
Q18c	$36 \div 60 \div 60 \times 1000 = 10$	10m/s	M1 Either dividing by 60 twice or multiplying by 1000 A1 cao

Question	Working	Answer	Notes
Q19a	$10 + \cos(60) = 10.5$ $8^2 = 64$	0.1640625	M1 for 10.5 or 64 A1 cao
Q19b		0.16	A1 cao
Q20a	$\frac{1}{2}(6+11) \times 7 = 59.5\text{cm}^2$	59.5cm^2	M1 Use of correct formula for area of a trapezium or or splitting the shape into a rectangle and a triangle A1 cao
Q20b	$BC^2 = 7^2 + 5^2$ $BC = \sqrt{74}$ $BC = 8.602325267$	8.6cm	M1 7 and 5 substituted in to Pythagoras Theorem A1 cao
Q21a	$1200 \times 0.8 = \text{£}960$	£960	M1 20% of 1200 = 240 or 1200×0.8 seen A1 cao
Q21b	$\text{£}480 = 80\%$ $\text{£}60 = 10\%$ $\text{£}600 = 100\%$	£600	M1 $\text{£}480 = 80\%$ seen A1 cao
Q22a	$x = 3y^2 + 4w$ $x + 4w = 3y^2$ $\frac{x + 4w}{3} = y^2$ $\sqrt{\frac{x + 4w}{3}} = y$	$y = \sqrt{\frac{x + 4w}{3}}$	M1 Subtracting 4w and dividing by 3 A1 cao

Question	Working	Answer	Notes
Q22b	$y = \sqrt{\frac{10 + 4 \times 2}{3}}$	$y = 3$	M1 Substituting x=10 and w=2 into their formula (ft from part a) A1 cao

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